



EUROPEAN MEDICINES AGENCY  
SCIENCE MEDICINES HEALTH

EMA/116425/2013  
EMA/H/C/002400

## EPAR summary for the public

---

# Adasuve

## loxapine

This is a summary of the European public assessment report (EPAR) for Adasuve. It explains how the Committee for Medicinal Products for Human Use (CHMP) assessed the medicine to reach its opinion in favour of granting a marketing authorisation and its recommendations on the conditions of use for Adasuve.

### What is Adasuve?

Adasuve is a medicine that contains the active substance loxapine. It is available as an inhalation powder in a portable inhaler device for single use (4.5 mg and 9.1 mg).

### What is Adasuve used for?

Adasuve is used to rapidly control mild to moderate agitation in adults with schizophrenia or bipolar disorder. Schizophrenia is a mental illness that has a number of symptoms, including disorganised thinking and speech, hallucinations (hearing or seeing things that are not there), suspiciousness and delusions (mistaken beliefs). Bipolar disorder is a mental illness with alternating periods of high mood and depression. Agitation is a known complication of both mental illnesses.

The medicine can only be obtained with a prescription.

### How is Adasuve used?

Adasuve should only be used in a hospital under the supervision of a healthcare professional. An airway-opening medicine called a short-acting beta agonist should also be available for the treatment of patients who develop bronchospasm (excessive and prolonged contraction of the airway muscles).

Treatment with Adasuve is started with the inhalation of a single dose of 9.1 mg. If considered necessary the doctor may prescribe a second dose of 9.1 mg after two hours. A lower dose of 4.5 mg may be prescribed if the patient did not tolerate the initial dose of 9.1 mg or if a lower dose is



considered more appropriate. Patients should be observed for signs of shortness of breath for one hour after each dose.

Information on how to use the inhaler can be found in the package leaflet.

### **How does Adasuve work?**

The active substance in Adasuve, loxapine, is an antipsychotic medicine. In the brain, it attaches to and blocks several different receptors on the surface of nerve cells. This disrupts signals transmitted between brain cells by 'neurotransmitters', chemicals that allow nerve cells to communicate with each other. Loxapine works mainly by blocking receptors for the neurotransmitters 5-hydroxytryptamine (also called serotonin) and dopamine. Since these neurotransmitters are involved in agitation in schizophrenia and bipolar disorder, loxapine helps to normalise the activity of the brain, reducing agitation. Its action on receptors for other neurotransmitters may also play a role.

### **How has Adasuve been studied?**

The effects of Adasuve were first tested in experimental models before being studied in humans.

Adasuve has been studied in two main studies. One study involved 344 patients with schizophrenia and the second study involved 314 patients with bipolar disorder. Both studies compared 4.5 mg and 9.1 mg of Adasuve with placebo (a dummy treatment).

The main measure of effectiveness was the change in the patients' symptoms two hours after giving a dose of loxapine, assessed using a standard scale of agitation in patients with schizophrenia and bipolar disorder (positive and negative symptom scale, excited component: PEC score). A fall in PEC score indicates an improvement in symptoms.

### **What benefit has Adasuve shown during the studies?**

Adasuve was more effective than placebo at controlling agitation. In the study in patients with schizophrenia, patients taking 4.5 mg of Adasuve had an average fall in PEC score of 8.0 points and patients taking 9.1 mg had an average fall of 8.7 points. This compared with a fall of 5.8 points in patients taking placebo. The PEC score at the beginning of the study for these groups of patients was between 17 and 18.

In the study in patients with bipolar disorder, patients taking 4.5 mg of Adasuve had an average fall in PEC score of 8.2 points, and patients taking 9.1 mg had an average fall of 9.2 points. This compared with a fall of 4.7 points in patients taking placebo. The PEC score at the beginning of the study for these groups of patients was between 17 and 18.

### **What is the risk associated with Adasuve?**

In studies in agitated patients, bronchospasm was reported as an uncommon but serious adverse reaction, while in subjects with active airways disease, bronchospasm was commonly reported and often required treatment with a short acting beta-agonist. The most common side effects with Adasuve are dysgeusia (taste disturbances), sedation or somnolence (sleepiness) and dizziness. For the full list of all side effects reported with Adasuve, see the package leaflet.

Adasuve must not be used in people who are hypersensitive (allergic) to loxapine or any of the other ingredients. It must also not be used in patients with symptoms such as wheezing and shortness of breath or who have lung conditions such as asthma or chronic obstructive pulmonary disease.

## **Why has Adasuve been approved?**

The CHMP concluded that Adasuve has been demonstrated to rapidly control (within minutes) mild to moderate agitation in patients with schizophrenia or bipolar disorder who are cooperative with using an inhaler. The CHMP noted that the administration of Adasuve is non-invasive. Regarding its safety, most side effects are comparable to those of other antipsychotic medicines. The potential risk of bronchospasm is considered manageable and has been adequately addressed through risk minimisation measures. The CHMP concluded that the benefits of Adasuve outweigh its risks and recommended that it be granted marketing authorisation.

## **What measures are being taken to ensure the safe use of Adasuve?**

The company that makes Adasuve must ensure that all healthcare professionals who are expected to use Adasuve receive an information pack containing key information on how to use the medicine as well as important safety information.

## **Other information about Adasuve**

The European Commission granted a marketing authorisation valid throughout the European Union for Adasuve on 20 February 2013.

The full EPAR for Adasuve can be found on the Agency's website: [ema.europa.eu/Find/medicine/Human\\_medicines/European\\_public\\_assessment\\_reports](http://ema.europa.eu/Find/medicine/Human_medicines/European_public_assessment_reports). For more information about treatment with Adasuve, read the package leaflet (also part of the EPAR) or contact your doctor or pharmacist.

This summary was last updated in 2-2013.